

# SEQUENCE LISTING

<110> Velculescu, Victor  
Kinzler, Kenneth  
Vogelstein, Bert  
Samuels, Yarden

<120> MUTATIONS OF THE PIK3CA GENE IN HUMAN  
CANCERS

<130> 001107.00617

<140> 10/591347

<141> 2006-08-31

<150> PCT/US2005/05193

<151> 2005-02-18

<150> 60/548886

<151> 2004-03-02

<160> 487

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 3412

<212> DNA

<213> Homo sapiens

<400> 1

atgcctccaa	gaccatcatc	aggtgaactg	tggggcatcc	acttgatgcc	cccaagaatc	60
ctagtggaa	gtttactacc	aatggaatg	atagtgaatt	tagaatgcct	ccgtgaggct	120
acattagtaa	ctataaagca	tgaactat	aaagaagcaa	gaaaataccc	tctccatcaa	180
cttcttcaag	atgaatcttc	ttacattttc	gtaagtgtta	cccaagaagc	agaaagggaa	240
gaattttttg	atgaaacaag	acgactttgt	gatcttcggc	tttttcaacc	atttttaaaa	300
gtaattgaac	cagtaggcaa	ccgtgaagaa	aagatcctca	atcgagaaat	tgggttttgc	360
atcggcatgc	cagtgtgcga	atttgatatg	gttaaagatc	ctgaagtaca	ggacttccga	420
agaaatattc	ttaatgtttg	taaagaagct	gtggatctta	gggatcttaa	ttcacctcat	480
agtagagcaa	tgtatgtcta	tccgccacat	gtagaatctt	caccagagct	gccaaagcac	540
atatataata	aattggatag	aggccaaata	atagtgggtga	tttgggtaat	agtttctcca	600
aataatgaca	agcagaagta	tactctgaaa	atcaaccatg	actgtgtgcc	agaacaagta	660
attgctgaag	caatcaggaa	aaaaactaga	agtatgttgc	tatcatctga	acaattaaaa	720
ctctgtgttt	tagaatatca	gggcaagtac	attttaaaaag	tgtgtggatg	tgatgaatac	780
ttcctagaaa	aatatcctct	gagtcagtat	aagtatataa	gaagctgtat	aatgcttggg	840
aggatgcca	atgtgaagat	gatggctaaa	gaaagccttt	attctcaact	gccaatggac	900
tgttttacaa	tgccatctta	ttccagacgc	atttccacag	ctacaccata	tatgaatgga	960
gaaacatcta	caaaatccct	ttgggttata	aatagagcac	tcagaataaa	aattctttgt	1020
gcaacctacg	tgaatctaaa	tattcgagac	attgacaaga	tttatgttcg	aacagggtatc	1080
taccatggag	gagaaccctt	atgtgacaat	gtgaacactc	aaagagtacc	ttgttccaat	1140
cccagggtgga	atgaatggct	gaattatgat	atatacat	ctgatcttcc	tcgtgctgct	1200
cgactttgcc	tttccatttg	ctctgttaaa	ggccgaaagg	gtgctaaaga	ggaacactgt	1260
ccattggcat	ggggaaatat	aaacttgttt	gattacacag	acactctagt	atctggaaaa	1320

atggcctttga	atctttggcc	agtacctcat	ggattagaag	atttgctgaa	ccctattggt	1380
gttactggat	caaatccaaa	taaagaaact	ccatgcttag	agttggagtt	tgactgggttc	1440
agcagtgtgg	taaagttccc	agatatgtca	gtgattgaag	agcatgccaa	ttgggtctgta	1500
tcccgagaag	caggatttag	ctattcccac	gcaggactga	gtaacagact	agctagagac	1560
aatgaattaa	gggaaaatga	caaagaacag	ctcaaagcaa	tttctacacg	agatcctctc	1620
tctgaaatca	ctgagcagga	gaaagatttt	ctatggagtc	acagacacta	ttgtgtaact	1680
atccccgaaa	ttctacccaa	attgcttctg	tctgttaaata	ggaattctag	agatgaagta	1740
gccagatgt	attgcttggt	aaaagattgg	cctccaatca	aacctgaaca	ggctatggaa	1800
cttctggact	gtaattaccc	agatcctatg	gttcgagggt	ttgctgttcg	gtgcttgga	1860
aaatatattaa	cagatgacaa	actttctcag	tatttaattc	agctagtaca	ggctctaaaa	1920
tatgaacaat	atttgataa	cttgcttggtg	agattttttac	tgaagaaagc	attgactaat	1980
caaaggattg	ggcacttttt	cttttggtcat	ttaaaatctg	agatgcacaa	taaaacagtt	2040
agccagaggt	ttggcctgct	tttgaggtcc	tattgtcgtg	catgtgggat	gtatttgaag	2100
cacctgaata	ggcaagtcca	ggcaatggaa	aagctcatta	acttaactga	cattctcaaa	2160
caggagagga	aggatgaaac	acaaaaggta	cagatgaagt	ttttagttga	gcaaatgagg	2220
cgaccagatt	tcatggatgc	cctacagggc	ttgctgtctc	ctctaaaccc	tgctcatcaa	2280
ctaggaaacc	tcaggcttaa	agagtgtcga	attatgtctt	ctgcaaaaag	gccactgtgg	2340
ttgaattggg	agaaccacga	catcatgtca	gagttactgt	ttcagaacaa	tgagatcatc	2400
tttaaaaaatg	gggatgattt	acggcaagat	atgctaacac	ttcaaattat	tcgtattatg	2460
gaaaaatatct	ggcaaaatca	aggtccttgat	cttcgaatgt	taccttatgg	ttgtctgtca	2520
atcggtgact	gtgtgggact	tattgaggtg	gtgcgaaatt	ctcacactat	tatgcaaatt	2580
cagtgcгааag	gcggcttgaa	aggtgcactg	cagttcaaca	gccacacact	acatcagtgg	2640
ctcaaagaca	agaacaaagg	agaaatatat	gatgcagcca	ttgacctgtt	tacacgttca	2700
tgtgctggat	actgtgtagc	taccttcatt	ttgggaattg	gagatcgtca	caatagtaac	2760
atcatggtga	aagacgatgg	acaactgttt	catatagatt	ttggacactt	tttggatcac	2820
aagaagaaaa	aatttggtta	taaacgagaa	cgtgtgccat	ttgttttgac	acaggatttc	2880
ttaatagtga	ttagttaaagg	agcccaagaa	tgacacaaaga	caagagaatt	tgagagggttt	2940
caggagatgt	gttacaaggc	ttatctagct	attcgacagc	atgccaatct	cttcataaat	3000
cttttctcaa	tgatgcttgg	ctctggaatg	ccagaactac	aatcttttga	tgacattgca	3060
tacattcgaa	agaccctagc	cttagataaa	actgagcaag	aggcttttga	gtatttcatg	3120
aaacaaatga	atgatgcaca	tcatggtggc	tggaacaaca	aaatggattg	gatcttccac	3180
acaattaaac	agcatgcatt	gaactgaaag	ataactgaga	aaatgaaagc	tcactctgga	3240
ttccacactg	cactgttaat	aactctcagc	aggcaaagac	cgattgcata	ggaattgcac	3300
aatccatgaa	cagcattaga	tttacagcaa	gaacagaaat	aaaatactat	ataattttaa	3360
taatgtaaac	gcaaacaggg	tttgatagca	cttaaactag	ttcatttcaa	aa	3412

<210> 2

<211> 3424

<212> DNA

<213> Homo sapiens

<400> 2

aggatcagaa	caatgcctcc	aagaccatca	tcagggtgaac	tgtggggcat	ccacttgatg	60
cccccaagaa	tcctagtggg	atgtttacta	ccaaatggaa	tgatagtga	tttagaatgc	120
ctccgtgagg	ctacattagt	aactataaag	catgaactat	ttaaagaagc	aagaaaatac	180
cctctccatc	aacttcttca	agatgaatct	tcttacattt	tcgtaagtgt	taccaagaa	240
gcagaaaggg	aagaattttt	tgatgaaaca	agacgacttt	gtgatcttcg	gctttttcaa	300
ccatttttaa	aagtaattga	accagtaggc	aaccgtgaag	aaaagatcct	caatcgagaa	360
attggttttg	ctatcggcat	gccagtgtgc	gaatttgata	tggttaaaga	tcctgaagta	420
caggacttcc	gaagaaatat	tcttaatgtt	tgtaaagaag	ctgtggatct	tagggatctt	480
aattcacctc	atagtagagc	aatgtatgtc	tatccgccac	atgtagaatc	ttcaccagag	540
ctgccaaagc	acatatataa	taaattggat	agaggccaaa	taatagtggg	gatttgggta	600
atagtttctc	caaataatga	caagcagaag	tatactctga	aaatcaacca	tgactgtgtg	660
ccagaacaag	taattgctga	agcaatcagg	aaaaaaacta	gaagtatgtt	gctatcatct	720
gaacaattaa	aactctgtgt	tttagaatat	cagggcaagt	acatttttaa	agtgtgtgga	780

tgtgatgaat	acttcctaga	aaaatatcct	ctgagtcagt	ataagtatat	aagaagctgt	840
ataatgcttg	ggaggatgcc	caatttgaag	atgatggcta	aagaaagcct	ttattctcaa	900
ctgccaatgg	actgttttac	aatgccatct	tattccagac	gcatttccac	agctacacca	960
tatatgaatg	gagaaacatc	tacaaaatcc	ctttgggtta	taaatagagc	actcagaata	1020
aaaattcttt	gtgcaacct	cgtgaatcta	aatattcgag	acattgacaa	gatttatgtt	1080
cgaacaggta	tctaccatgg	aggagaaccc	ttatgtgaca	atgtgaacac	tcaaagagta	1140
ccttggtcca	atcccagggt	gaatgaatgg	ctgaattatg	atatatacat	tcctgatctt	1200
cctcgtgctg	ctcgactttg	cctttccatt	tgctctgtta	aaggccgaaa	gggtgctaaa	1260
gaggaacact	gtccattggc	atggggaaat	ataaacttgt	ttgattacac	agacactcta	1320
gtatctggaa	aaatggcttt	gaatccttgg	ccagtacctc	atggattaga	agatttgctg	1380
aaccttattg	gtgttactgg	atcaaatacca	aataaagaaa	ctccatgctt	agagttggag	1440
tttgactggt	tcagcagtg	ggtaaagttc	ccagatatgt	cagtgattga	agagcatgcc	1500
aattggtctg	tatcccagag	agcaggattt	agctattccc	acgcaggact	gagtaacaga	1560
ctagctagag	acaatgaatt	aagggaaaaat	gacaaagaac	agctcaaagc	aatttctaca	1620
cgagatcctc	tctctgaaat	cactgagcag	gagaaagatt	ttctatggag	tcacagacac	1680
tattgtgtaa	ctatccccga	aattctaccc	aaattgcttc	tgtctgttaa	atggaattct	1740
agagatgaag	tagcccagat	gtattgcttg	gtaaaagatt	ggcctccaat	caaacctgaa	1800
caggctatgg	aacttctgga	ctgtaattac	ccagatccta	tggttcgagg	ttttgctggt	1860
cggtgcttgg	aaaaatattt	aacagatgac	aaactttctc	agtatttaat	tcagctagta	1920
caggtcctaa	aatatgaaca	atatttggat	aacttgcttg	tgagattttt	actgaagaaa	1980
gcattgacta	atcaaaggat	tgggcacttt	ttcttttggc	atttaaaatc	tgagatgcac	2040
aataaaacag	ttagccagag	gtttggcctg	cttttggagt	cctattgtcg	tgcatgtggg	2100
atgtatttga	agcacctgaa	taggcaagtc	gaggcaatgg	aaaagctcat	taacttaact	2160
gacattctca	aacaggagag	gaaggatgaa	acacaaaagg	tacagatgaa	gttttttagtt	2220
gagcaaatga	ggcgaccaga	tttcatggat	gccctacagg	gcttgctgtc	tcctctaaac	2280
cctgctcatc	aactaggaaa	cctcaggctt	aaagagtgtc	gaattatgtc	ttctgcaaaa	2340
aggccactgt	ggttgaattg	ggagaaccca	gacatcatgt	cagagttact	gtttcagaac	2400
aatgagatca	tctttaaaaa	tggggatgat	ttacggcaag	atatgctaac	acttcaaatt	2460
attcgattta	tggaaaatat	ctggcaaaaat	caaggtcttg	atcttcgaat	gttaccttat	2520
ggttgtctgt	caatcggtga	ctgtgtggga	cttattgagg	tgggtgcgaa	ttctcacact	2580
attatgcaaa	ttcagtgcac	aggcggcttg	aaaggtgcac	tgagttcaa	cagccacaca	2640
ctacatcagt	ggctcaaaga	caagaacaaa	ggagaaatat	atgatgcagc	cattgacctg	2700
tttacacgtt	catgtgctgg	atactgtgta	gctaccttca	ttttgggaat	tgagatcgt	2760
cacaatatga	acatcatggt	gaaagacgat	ggacaactgt	ttcatataga	ttttggacac	2820
tttttggatc	acaagaagaa	aaaatttggg	tataaacgag	aacgtgtgcc	atgtgttttg	2880
acacaggatt	tcttaatagt	gattagtaaa	ggagcccaag	aatgcacaaa	gacaagagaa	2940
tttgagaggt	ttcaggagat	gtgttacaa	gcttatctag	ctattcgaca	gcatgccaat	3000
ctcttcataa	atcttttctc	aatgatgctt	ggctctggaa	tgccagaact	acaatctttt	3060
gatgacattg	catacattcg	aaagacccta	gccttagata	aaactgagca	agaggctttg	3120
gagtatttca	tgaaacaaat	gaatgatgca	catcatgggt	gctggacaac	aaaaatggat	3180
tggatcttcc	acacaattaa	acagcatgca	ttgaactgaa	agataactga	gaaaatgaaa	3240
gctcactctg	gattccacac	tgactgttta	ataactctca	gcaggcaaag	accgattgca	3300
taggaattgc	acaatccatg	aacagcatta	gatttacagc	aagaacagaa	ataaaatact	3360
atataattta	aataatgtaa	acgcaaacag	ggtttgatag	cacttaaact	agttcatttc	3420
aaaa						3424

<210> 3

<211> 1068

<212> PRT

<213> Homo sapiens

<400> 3

Met	Pro	Pro	Arg	Pro	Ser	Ser	Gly	Glu	Leu	Trp	Gly	Ile	His	Leu	Met
1					5				10					15	
Pro	Pro	Arg	Ile	Leu	Val	Glu	Cys	Leu	Leu	Pro	Asn	Gly	Met	Ile	Val

				20				25					30		
Thr	Leu	Glu	Cys	Leu	Arg	Glu	Ala	Thr	Leu	Val	Thr	Ile	Lys	His	Glu
		35					40					45			
Leu	Phe	Lys	Glu	Ala	Arg	Lys	Tyr	Pro	Leu	His	Gln	Leu	Leu	Gln	Asp
	50					55					60				
Glu	Ser	Ser	Tyr	Ile	Phe	Val	Ser	Val	Thr	Gln	Glu	Ala	Glu	Arg	Glu
65					70					75					80
Glu	Phe	Phe	Asp	Glu	Thr	Arg	Arg	Leu	Cys	Asp	Leu	Arg	Leu	Phe	Gln
				85					90					95	
Pro	Phe	Leu	Lys	Val	Ile	Glu	Pro	Val	Gly	Asn	Arg	Glu	Glu	Lys	Ile
			100					105					110		
Leu	Asn	Arg	Glu	Ile	Gly	Phe	Ala	Ile	Gly	Met	Pro	Val	Cys	Glu	Phe
		115					120					125			
Asp	Met	Val	Lys	Asp	Pro	Glu	Val	Gln	Asp	Phe	Arg	Arg	Asn	Ile	Leu
	130					135					140				
Asn	Val	Cys	Lys	Glu	Ala	Val	Asp	Leu	Arg	Asp	Leu	Asn	Ser	Pro	His
145					150					155					160
Ser	Arg	Ala	Met	Tyr	Val	Tyr	Pro	Pro	His	Val	Glu	Ser	Ser	Pro	Glu
				165					170					175	
Leu	Pro	Lys	His	Ile	Tyr	Asn	Lys	Leu	Asp	Arg	Gly	Gln	Ile	Ile	Val
			180					185					190		
Val	Ile	Trp	Val	Ile	Val	Ser	Pro	Asn	Asn	Asp	Lys	Gln	Lys	Tyr	Thr
		195					200					205			
Leu	Lys	Ile	Asn	His	Asp	Cys	Val	Pro	Glu	Gln	Val	Ile	Ala	Glu	Ala
	210					215					220				
Ile	Arg	Lys	Lys	Thr	Arg	Ser	Met	Leu	Leu	Ser	Ser	Glu	Gln	Leu	Lys
225					230					235					240
Leu	Cys	Val	Leu	Glu	Tyr	Gln	Gly	Lys	Tyr	Ile	Leu	Lys	Val	Cys	Gly
				245					250					255	
Cys	Asp	Glu	Tyr	Phe	Leu	Glu	Lys	Tyr	Pro	Leu	Ser	Gln	Tyr	Lys	Tyr
			260					265					270		
Ile	Arg	Ser	Cys	Ile	Met	Leu	Gly	Arg	Met	Pro	Asn	Leu	Lys	Met	Met
		275					280					285			
Ala	Lys	Glu	Ser	Leu	Tyr	Ser	Gln	Leu	Pro	Met	Asp	Cys	Phe	Thr	Met
	290					295					300				
Pro	Ser	Tyr	Ser	Arg	Arg	Ile	Ser	Thr	Ala	Thr	Pro	Tyr	Met	Asn	Gly
305					310					315					320
Glu	Thr	Ser	Thr	Lys	Ser	Leu	Trp	Val	Ile	Asn	Arg	Ala	Leu	Arg	Ile
				325					330					335	
Lys	Ile	Leu	Cys	Ala	Thr	Tyr	Val	Asn	Leu	Asn	Ile	Arg	Asp	Ile	Asp
			340					345					350		
Lys	Ile	Tyr	Val	Arg	Thr	Gly	Ile	Tyr	His	Gly	Gly	Glu	Pro	Leu	Cys
		355					360					365			
Asp	Asn	Val	Asn	Thr	Gln	Arg	Val	Pro	Cys	Ser	Asn	Pro	Arg	Trp	Asn
	370					375									

Asn	Pro	Asn	Lys	Glu	Thr	Pro	Cys	Leu	Glu	Leu	Glu	Phe	Asp	Trp	Phe	
465					470					475					480	
Ser	Ser	Val	Val	Lys	Phe	Pro	Asp	Met	Ser	Val	Ile	Glu	Glu	His	Ala	
				485					490					495		
Asn	Trp	Ser	Val	Ser	Arg	Glu	Ala	Gly	Phe	Ser	Tyr	Ser	His	Ala	Gly	
			500					505					510			
Leu	Ser	Asn	Arg	Leu	Ala	Arg	Asp	Asn	Glu	Leu	Arg	Glu	Asn	Asp	Lys	
		515					520					525				
Glu	Gln	Leu	Lys	Ala	Ile	Ser	Thr	Arg	Asp	Pro	Leu	Ser	Glu	Ile	Thr	
	530					535					540					
Glu	Gln	Glu	Lys	Asp	Phe	Leu	Trp	Ser	His	Arg	His	Tyr	Cys	Val	Thr	
545					550					555					560	
Ile	Pro	Glu	Ile	Leu	Pro	Lys	Leu	Leu	Leu	Ser	Val	Lys	Trp	Asn	Ser	
				565					570					575		
Arg	Asp	Glu	Val	Ala	Gln	Met	Tyr	Cys	Leu	Val	Lys	Asp	Trp	Pro	Pro	
			580					585					590			
Ile	Lys	Pro	Glu	Gln	Ala	Met	Glu	Leu	Leu	Asp	Cys	Asn	Tyr	Pro	Asp	
		595					600					605				
Pro	Met	Val	Arg	Gly	Phe	Ala	Val	Arg	Cys	Leu	Glu	Lys	Tyr	Leu	Thr	
	610					615					620					
Asp	Asp	Lys	Leu	Ser	Gln	Tyr	Leu	Ile	Gln	Leu	Val	Gln	Val	Leu	Lys	
625					630					635					640	
Tyr	Glu	Gln	Tyr	Leu	Asp	Asn	Leu	Leu	Val	Arg	Phe	Leu	Leu	Lys	Lys	
				645					650					655		
Ala	Leu	Thr	Asn	Gln	Arg	Ile	Gly	His	Phe	Phe	Phe	Trp	His	Leu	Lys	
			660					665					670			
Ser	Glu	Met	His	Asn	Lys	Thr	Val	Ser	Gln	Arg	Phe	Gly	Leu	Leu	Leu	
		675					680					685				
Glu	Ser	Tyr	Cys	Arg	Ala	Cys	Gly	Met	Tyr	Leu	Lys	His	Leu	Asn	Arg	
	690					695				700						
Gln	Val	Glu	Ala	Met	Glu	Lys	Leu	Ile	Asn	Leu	Thr	Asp	Ile	Leu	Lys	
705					710					715					720	
Gln	Glu	Arg	Lys	Asp	Glu	Thr	Gln	Lys	Val	Gln	Met	Lys	Phe	Leu	Val	
				725					730					735		
Glu	Gln	Met	Arg	Arg	Pro	Asp	Phe	Met	Asp	Ala	Leu	Gln	Gly	Leu	Leu	
			740					745					750			
Ser	Pro	Leu	Asn	Pro	Ala	His	Gln	Leu	Gly	Asn	Leu	Arg	Leu	Lys	Glu	
		755					760						765			
Cys	Arg	Ile	Met	Ser	Ser	Ala	Lys	Arg	Pro	Leu	Trp	Leu	Asn	Trp	Glu	
	770					775					780					
Asn	Pro	Asp	Ile	Met	Ser	Glu	Leu	Leu	Phe	Gln	Asn	Asn	Glu	Ile	Ile	
785					790					795					800	
Phe	Lys	Asn	Gly	Asp	Asp	Leu	Arg	Gln	Asp	Met	Leu	Thr	Leu	Gln	Ile	
				805					810					815		
Ile	Arg	Ile	Met	Glu	Asn	Ile	Trp	Gln	Asn	Gln	Gly	Leu	Asp	Leu	Arg	
			820					825					830			
Met	Leu	Pro	Tyr	Gly	Cys	Leu	Ser	Ile	Gly	Asp	Cys	Val	Gly	Leu	Ile	
		835					840					845				
Glu	Val	Val	Arg	Asn	Ser	His	Thr	Ile	Met	Gln	Ile	Gln	Cys	Lys	Gly	
	850					855					860					
Gly	Leu	Lys	Gly	Ala	Leu	Gln	Phe	Asn	Ser	His	Thr	Leu	His	Gln	Trp	
865					870					875					880	
Leu	Lys	Asp	Lys	Asn	Lys	Gly	Glu	Ile	Tyr	Asp	Ala	Ala	Ile	Asp	Leu	
				885					890					895		
Phe	Thr	Arg	Ser	Cys	Ala	Gly	Tyr	Cys	Val	Ala	Thr	Phe	Ile	Leu	Gly	

	900		905		910
Ile	Gly Asp Arg His Asn Ser Asn Ile Met Val Lys Asp Asp Gly Gln				
	915		920		925
Leu	Phe His Ile Asp Phe Gly His Phe Leu Asp His Lys Lys Lys Lys				
	930		935		940
Phe	Gly Tyr Lys Arg Glu Arg Val Pro Phe Val Leu Thr Gln Asp Phe				
	945		950		955
Leu	Ile Val Ile Ser Lys Gly Ala Gln Glu Cys Thr Lys Thr Arg Glu				
		965		970	
Phe	Glu Arg Phe Gln Glu Met Cys Tyr Lys Ala Tyr Leu Ala Ile Arg				
		980		985	
Gln	His Ala Asn Leu Phe Ile Asn Leu Phe Ser Met Met Leu Gly Ser				
		995		1000	
Gly	Met Pro Glu Leu Gln Ser Phe Asp Asp Ile Ala Tyr Ile Arg Lys				
		1010		1015	
Thr	Leu Ala Leu Asp Lys Thr Glu Gln Glu Ala Leu Glu Tyr Phe Met				
		1025		1030	
Lys	Gln Met Asn Asp Ala His His Gly Gly Trp Thr Thr Lys Met Asp				
		1045		1050	
Trp	Ile Phe His Thr Ile Lys Gln His Ala Leu Asn				
		1060		1065	

<210> 4  
 <211> 125  
 <212> DNA  
 <213> Homo sapiens

<400> 4	
agtaacagac tagctagaga caatgaatta agggaaaatg acaaagaaca gctcaaagca	60
atttctacac gagatcctct ctctgaaatc actgagcagg agaaagattt tctatggagt	120
cacag	125

<210> 5  
 <211> 1186  
 <212> DNA  
 <213> Homo sapiens

<400> 5	
gtttcaggag atgtgttaca aggcttatct agctattcga cagcatgccca atctcttcat	60
aaatcttttc tcaatgatgc ttggctcttg aatgccagaa ctacaatctt ttgatgacat	120
tgcatacatt cgaaagaccc tagccttaga taaaactgag caagaggctt tggagtattt	180
catgaaacaa atgaatgatg cacatcatgg tggctggaca acaaaaatgg attggatctt	240
ccacacaatt aaacagcatg cattgaactg aaaagataac tgagaaaatg aaagctcact	300
ctggattcca cactgactg ttaataactc tcagcaggca aagaccgatt gcataggaat	360
tgcacaatcc atgaacagca ttagaattta cagcaagaac agaaataaaa tactatataa	420
tttaaataat gtaaacgcaa acagggtttg atagcactta aactagttca tttcaaaatt	480
aagcttttaga ataatgcgca atttcatgtt atgccttaag tccaaaaagg taaactttga	540
agattgtttg tatctttttt taaaaaacia aacaaaacia aaatcccaa aatatataga	600
aatgatggag aaggaaaaag tgatggtttt ttttgtcttg caaatgttct atgttttgaa	660
atgtggacac aacaaaggct gttattgcat taggtgtaag taaactggag tttatgttaa	720
attacattga ttggaaaaga atgaaaattt cttatttttc cattgctgtt caatttatag	780
tttgaagtgg gtttttgact gcttgtttaa tgaagaaaaa tgcttggggg ggaagggact	840
cttgagattt caccagagac tttttctttt taataaatca aaccttttga tgatttgagg	900
ttttatctgc agtttttgaa gcagtcacaa atgagacctg ttataagggtg gtattttttt	960

ttttcttctg gacagtattt aaaggatctt attcttattt cccagggaaa ttctgggctc	1020
ccacaaagta aaaaaaaaaa aaaatcatag aaaaagaatg agcaggaata gttcttattc	1080
cagaattgta cagtattcac cttaagttga ttttttttct ctttctgcaa ttgaactgaa	1140
tacatTTTTTc atgcatgttt tccagaaaat agaagtatta atgtta	1186

<210> 6  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 6	
ttccagcctg ggtaacaaag	20

<210> 7  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 7	
cctgacctca ggtgttctgc	20

<210> 8  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 8	
tgcacattct gcacgtgtat c	21

<210> 9  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens

<400> 9	
tcccagtttg tatgctattg agag	24

<210> 10  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 10	
tggaaattca aaagtgtgtg g	21

<210> 11  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens

<400> 11	
cactaatgaa cccctcaaga ctg	23

<210> 12  
 <211> 20

<212> DNA  
 <213> Homo sapiens  
  
 <400> 12  
 tccttggcaa agtgacaatc 20  
  
 <210> 13  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 13  
 ctctcacata caacaccatc tcc 23  
  
 <210> 14  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 14  
 atgtatctca ttgaaaaccc aac 23  
  
 <210> 15  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 15  
 tcccaaagtg ctgggattac 20  
  
 <210> 16  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 16  
 cctatgacat aaatgccagt acaaac 26  
  
 <210> 17  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 17  
 tcttttggtc agtcagcatc tctc 24  
  
 <210> 18  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 18  
 ttgagaattc agatgagaaa ccag 24  
  
 <210> 19



<211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 19  
 gaaggccact ctcaaactg 20  
  
 <210> 20  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 20  
 tcaaggcttg catttcattg 20  
  
 <210> 21  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 21  
 ttccacactc caaagaatgc 20  
  
 <210> 22  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 22  
 aattgcaatc ctcttggtag c 21  
  
 <210> 23  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 23  
 gccaaagacca agcaactcc 19  
  
 <210> 24  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 24  
 ataaacgacc gctggcctac 20  
  
 <210> 25  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 25  
 gtacatccgg ggacacaatg 20

<210> 26  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 26  
 accgggttct tccagctaag 20  
  
 <210> 27  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 27  
 caatgcgtgc gttaaactctg 20  
  
 <210> 28  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 28  
 cccaatgcca cggactac 18  
  
 <210> 29  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 29  
 atccagctgg ctctgatagg 20  
  
 <210> 30  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 30  
 ctggtgctga aactcgactg 20  
  
 <210> 31  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 31  
 gtctcgttct ctccctcacg 20  
  
 <210> 32  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 32  
 cacaacctcg cccagttc 18

<210> 33  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 33  
 agcatcaccc tcagagcata c 21  
  
 <210> 34  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 34  
 tgccatacct cttaggcact tc 22  
  
 <210> 35  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 35  
 cgacagagca agattccatc 20  
  
 <210> 36  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 36  
 agattgccat ctgaggaagg 20  
  
 <210> 37  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 37  
 gcatggagag gaagtgaacc 20  
  
 <210> 38  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 38  
 tggccagaga gtttgattta tg 22  
  
 <210> 39  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 39

ccctcaatct cttgggaaag	20
<210> 40	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 40	
tggtttcttc tcatggacag g	21
<210> 41	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 41	
gggtgtccac acttctcagg	20
<210> 42	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 42	
ccggaagaaa caatgagcag	20
<210> 43	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 43	
ggtgtgagct gagtgagcag	20
<210> 44	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 44	
gtgggaatga ccttcctttc	20
<210> 45	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 45	
ggatgaacag gcagatgtga g	21
<210> 46	
<211> 20	
<212> DNA	
<213> Homo sapiens	

<400> 46	
agccccttct atccagtgtg	20
<210> 47	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 47	
tgcccacagc atctgtctac	20
<210> 48	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 48	
attgtgtgcc agtcatttgc	20
<210> 49	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 49	
ttccacatta agcatgagca c	21
<210> 50	
<211> 27	
<212> DNA	
<213> Homo sapiens	
<400> 50	
gacagtcatt cttttcatag gtcatag	27
<210> 51	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 51	
ccacatagta agccttcaat gac	23
<210> 52	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 52	
tgaaaaatgt tcctttattc ttg	23
<210> 53	
<211> 21	
<212> DNA	
<213> Homo sapiens	

<400> 53	
tctgagaaca ttccctgatc c	21
<210> 54	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 54	
tcagctctct aatcctgaac tgc	23
<210> 55	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 55	
agcagagaag aaacatatac cat	23
<210> 56	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 56	
cattttggga aaggaggttc	20
<210> 57	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 57	
attacaggcg tgagccactg	20
<210> 58	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 58	
tttggcactg tcttcagagg	20
<210> 59	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 59	
agaggggaaca ccctttcctg	20
<210> 60	
<211> 20	
<212> DNA	

<213> Homo sapiens

<400> 60

tatagcggtg tgcccatgac

20

<210> 61

<211> 26

<212> DNA

<213> Homo sapiens

<400> 61

tcctgcctct ttgctatattt tcaatg

26

<210> 62

<211> 22

<212> DNA

<213> Homo sapiens

<400> 62

ttgcctcaga gagatcatca ag

22

<210> 63

<211> 20

<212> DNA

<213> Homo sapiens

<400> 63

taggggcgct aatcgtactg

20

<210> 64

<211> 21

<212> DNA

<213> Homo sapiens

<400> 64

tctgatatgc atcagccact g

21

<210> 65

<211> 20

<212> DNA

<213> Homo sapiens

<400> 65

tgatttcaag ggaagcagag

20

<210> 66

<211> 20

<212> DNA

<213> Homo sapiens

<400> 66

tgtagaaagc aaggctgctc

20

<210> 67

<211> 20

<212> DNA  
 <213> Homo sapiens  
  
 <400> 67  
 acccccaaagt catccaagtg 20  
  
 <210> 68  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 68  
 aaaggctcca gttgatggac 20  
  
 <210> 69  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 69  
 ccattaaaac cactctaagt cagg 24  
  
 <210> 70  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 70  
 aagcctcctc cagaaaagaa g 21  
  
 <210> 71  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 71  
 ccctcctgtc cactgagatg 20  
  
 <210> 72  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 72  
 tctcaagctg cctcacaatg 20  
  
 <210> 73  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 73  
 aaagacattg ccatgcaaac 20  
  
 <210> 74



<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 74	
ttgttgggct ccaaataaac	20
<210> 75	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 75	
ccctggagtg cttacatgag	20
<210> 76	
<211> 27	
<212> DNA	
<213> Homo sapiens	
<400> 76	
gactttataa acactcgaca ttagagc	27
<210> 77	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 77	
atgatgacct ctggcaggac	20
<210> 78	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 78	
gaatcaaccg tcagcgtgtc	20
<210> 79	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 79	
ctggcaccgg ggaaaacaga g	21
<210> 80	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 80	
tggacatcga ctacaagtct gg	22

<210> 81	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 81	
tccttggggt tttgaagaag	20
<210> 82	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 82	
aaggccttcc agactcttgc	20
<210> 83	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 83	
cctctttgtt tttccctacc g	21
<210> 84	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 84	
cttccacagt gggggtacag	20
<210> 85	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 85	
gacacaacgg caacattatg ctg	23
<210> 86	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 86	
cattccaaag catctggttt tac	23
<210> 87	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 87	
ttgtgaggaa cgtgtgatta gg	22

<210> 88  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 88  
 ctgggcaaca gagcaagac 19  
  
 <210> 89  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 89  
 tcccttctcc tttggctatg 20  
  
 <210> 90  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 90  
 atagcaccac tgccttccag 20  
  
 <210> 91  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 91  
 tgcagaagtg gaggtggag 19  
  
 <210> 92  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 92  
 aacccaagct gcttcctttc 20  
  
 <210> 93  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 93  
 agtcctgccc tgattccttc 20  
  
 <210> 94  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 94

cccacccact tattcctgag	20
<210> 95	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 95	
tttccccttt agggtaggta gg	22
<210> 96	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 96	
cggacataga ggaaggattg c	21
<210> 97	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 97	
tggccaaact tttcaaattc	20
<210> 98	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 98	
tgggagagct cagggaatac	20
<210> 99	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 99	
tcccaaagtg ctgggattac	20
<210> 100	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 100	
ttggctgcca tgactaacac	20
<210> 101	
<211> 20	
<212> DNA	
<213> Homo sapiens	

<400> 101 gctctcagtg tgcctcatgg	20
<210> 102 <211> 18 <212> DNA <213> Homo sapiens	
<400> 102 aagaaacacc ccggttcc	18
<210> 103 <211> 27 <212> DNA <213> Homo sapiens	
<400> 103 aaatttagtt gagtaatgag agaatgc	27
<210> 104 <211> 20 <212> DNA <213> Homo sapiens	
<400> 104 gtaaaattgg ccctgctttg	20
<210> 105 <211> 20 <212> DNA <213> Homo sapiens	
<400> 105 cataaccaca tgcagcaacc	20
<210> 106 <211> 20 <212> DNA <213> Homo sapiens	
<400> 106 aattggcctt ggagacagac	20
<210> 107 <211> 21 <212> DNA <213> Homo sapiens	
<400> 107 ttcatgtgag caggtatgct g	21
<210> 108 <211> 20 <212> DNA <213> Homo sapiens	

<400> 108  
 ttgtgtacga ccctctggtg 20  
  
 <210> 109  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 109  
 tttgtacagt ggaggcaacg 20  
  
 <210> 110  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 110  
 cagctggtta tgtgtgttta tgg 23  
  
 <210> 111  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 111  
 tgtcctcatg gttgcttttc 20  
  
 <210> 112  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 112  
 cagggacatg ctatccaaag 20  
  
 <210> 113  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 113  
 tgggtggaact tgtgtttttc c 21  
  
 <210> 114  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 114  
 tcatacgggtt ttggcagctc 20  
  
 <210> 115  
 <211> 20  
 <212> DNA

<213> Homo sapiens

<400> 115

acagagggag aagggtcag

20

<210> 116

<211> 20

<212> DNA

<213> Homo sapiens

<400> 116

tgggacaatt ttcgcagaag

20

<210> 117

<211> 20

<212> DNA

<213> Homo sapiens

<400> 117

atgaagcatg ctgcctgatg

20

<210> 118

<211> 19

<212> DNA

<213> Homo sapiens

<400> 118

gggggccttt agaaggaag

19

<210> 119

<211> 21

<212> DNA

<213> Homo sapiens

<400> 119

tggagttcct gagaaatgag c

21

<210> 120

<211> 20

<212> DNA

<213> Homo sapiens

<400> 120

agaggaaca ccctttcctg

20

<210> 121

<211> 22

<212> DNA

<213> Homo sapiens

<400> 121

catgatgttg gagcttacat gc

22

<210> 122

<211> 20

<212> DNA  
 <213> Homo sapiens  
  
 <400> 122  
 cgggattgga gacagacatc 20  
  
 <210> 123  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 123  
 catcatggta cacgcactcc 20  
  
 <210> 124  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 124  
 ctcaatcaga gcctgaacca c 21  
  
 <210> 125  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 125  
 cccggcctaa agttgtagtt c 21  
  
 <210> 126  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 126  
 tgggagactg tcaagagggtg 20  
  
 <210> 127  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 127  
 ttcctccaag gagctttgtc 20  
  
 <210> 128  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 128  
 ttccctgtcc agactgtag c 21  
  
 <210> 129



<211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 129  
 ccggttatgc acatcattta ag 22  
  
 <210> 130  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 130  
 gcagccagag cagaagtaaa c 21  
  
 <210> 131  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 131  
 tctaataaaa gccactctg c 21  
  
 <210> 132  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 132  
 aagtgtgcat gatgtttgtt cc 22  
  
 <210> 133  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 133  
 gatgaccaag aatgcaaacy 20  
  
 <210> 134  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 134  
 atcatcttta agaacgggga tgg 23  
  
 <210> 135  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 135  
 cctcagatgc tggtgccg 18

<210> 136  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 136  
 tcttcacatgcc ttggctctgg 20  
  
 <210> 137  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 137  
 tccgagagag tgggcaggta 20  
  
 <210> 138  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 138  
 gggcaggttt gtgggtcat 19  
  
 <210> 139  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 139  
 ggaactgggg gctctggg 18  
  
 <210> 140  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 140  
 gtttctgctt tgggacaacc at 22  
  
 <210> 141  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 141  
 ctccacgacc atcatcagg 19  
  
 <210> 142  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 142  
 ccccctccat caacttcttc 20

<210> 143  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 143  
 tcatcaaaaa tttgttttaa cctagc 26  
  
 <210> 144  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 144  
 ttctgaacgt ttgtaaagaa gctg 24  
  
 <210> 145  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 145  
 gcagcccgct cagatataaa c 21  
  
 <210> 146  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 146  
 tctgaaaatc aaccatgact gtg 23  
  
 <210> 147  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 147  
 tcttgtgctt caacgtaaat cc 22  
  
 <210> 148  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 148  
 tctcaactgc caatggactg 20  
  
 <210> 149  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 149

tagtggatga aggcagcaac	20
<210> 150	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 150	
tgccttttcc aatcaatctc	20
<210> 151	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 151	
ggggaaaaag gaaagaatgg	20
<210> 152	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 152	
tttgctgaac cctattggtg	20
<210> 153	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 153	
gattggttct ttctgtctc tg	22
<210> 154	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 154	
accttttgaa cagcatgcaa	20
<210> 155	
<211> 27	
<212> DNA	
<213> Homo sapiens	
<400> 155	
aaaacaccct taacattatt tccatag	27
<210> 156	
<211> 28	
<212> DNA	
<213> Homo sapiens	

<400> 156 tttattctag atccatacaa cttccttt	28
<210> 157 <211> 21 <212> DNA <213> Homo sapiens	
<400> 157 ctgaaactca tgggtggtttt g	21
<210> 158 <211> 21 <212> DNA <213> Homo sapiens	
<400> 158 gagtgttgct gctctgtgtt g	21
<210> 159 <211> 25 <212> DNA <213> Homo sapiens	
<400> 159 ggattcctaa ataaaaattg aggtg	25
<210> 160 <211> 23 <212> DNA <213> Homo sapiens	
<400> 160 ttgctttcct gaagtttctt ttg	23
<210> 161 <211> 20 <212> DNA <213> Homo sapiens	
<400> 161 ggggaaaggc agtaaaggtc	20
<210> 162 <211> 23 <212> DNA <213> Homo sapiens	
<400> 162 tccttattcg ttgtcagtga ttg	23
<210> 163 <211> 20 <212> DNA <213> Homo sapiens	

<400> 163	
catggtgaaa gacgatggac	20
<210> 164	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 164	
tggggtaaag ggaatcaaaa g	21
<210> 165	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 165	
ttgcatacat tcgaaagacc	20
<210> 166	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 166	
cgtcagaaca agaccctgtg	20
<210> 167	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 167	
cccggccact aagttatttt tc	22
<210> 168	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 168	
ctgccattaa atgcgtcttg	20
<210> 169	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 169	
ctttgggcct ttttcattcc	20
<210> 170	
<211> 20	
<212> DNA	

<213> Homo sapiens

<400> 170

tgtctggctt atttcacacg

20

<210> 171

<211> 24

<212> DNA

<213> Homo sapiens

<400> 171

aacttttgac agcctactat gtgc

24

<210> 172

<211> 23

<212> DNA

<213> Homo sapiens

<400> 172

gaccattcat gaaagaaaca agc

23

<210> 173

<211> 23

<212> DNA

<213> Homo sapiens

<400> 173

ccatgtaccg gtaacaaaag aag

23

<210> 174

<211> 23

<212> DNA

<213> Homo sapiens

<400> 174

tgagctttct aggatcgtag ctg

23

<210> 175

<211> 20

<212> DNA

<213> Homo sapiens

<400> 175

gcaggaaggt ccaacttgtc

20

<210> 176

<211> 20

<212> DNA

<213> Homo sapiens

<400> 176

atcttcaact gcgaacatgc

20

<210> 177

<211> 26

<212> DNA  
 <213> Homo sapiens  
  
 <400> 177  
 aagcatcaat gactacttta atcaac 26  
  
 <210> 178  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 178  
 tcccaaagtg ctgggattac 20  
  
 <210> 179  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 179  
 ttgttgcctt tgtcattttg 20  
  
 <210> 180  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 180  
 atgtgactgt gggcaggaac 20  
  
 <210> 181  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 181  
 gctggtgaga tgtcaaaacg 20  
  
 <210> 182  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 182  
 tcaacatatt acttcctcca gaactc 26  
  
 <210> 183  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 183  
 ttctcccatg tcaggaatc 20  
  
 <210> 184



<211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 184  
 gaccctcaaa ggctaacgtg 20

<210> 185  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 185  
 tccctggtca gcacagacta c 21

<210> 186  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens

<400> 186  
 agctgtctca tttccaccat c 21

<210> 187  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 187  
 cgcgtcgttt atgtcaaadc 20

<210> 188  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 188  
 cgcgtcgttt atgtcaaadc 20

<210> 189  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens

<400> 189  
 cataacacac aggggtgctg 20

<210> 190  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens

<400> 190  
 gaactgggac aggttgctg 18

<210> 191  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 191  
 tccctttctt acacgcaaac 20  
  
 <210> 192  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 192  
 cagttccgcc tgtacattca c 21  
  
 <210> 193  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 193  
 agcgtcctg ctttcagtc 19  
  
 <210> 194  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 194  
 gtcttggcgc agatcatcac 20  
  
 <210> 195  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 195  
 ttttgtcacc agttgaaatg c 21  
  
 <210> 196  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 196  
 gactgggaaa aagcatgagc 20  
  
 <210> 197  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 197  
 cggtgatcat aatattgtca ttgtg 25

<210> 198  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 198  
 ggaagtgtgg gcttgtcttc 20  
  
 <210> 199  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 199  
 tgcacagtcc atcctttgtc 20  
  
 <210> 200  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 200  
 aatgccagct ttcacaatgt c 21  
  
 <210> 201  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 201  
 ggccaagacc acatggtaag 20  
  
 <210> 202  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 202  
 tcctacatta agacagcatg gaac 24  
  
 <210> 203  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 203  
 tgcctccctt ttaaggctat c 21  
  
 <210> 204  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 204

aggtccttct gccacaaaag	20
<210> 205 <211> 20 <212> DNA <213> Homo sapiens	
<400> 205 cgtcttctct cctccaatgc	20
<210> 206 <211> 20 <212> DNA <213> Homo sapiens	
<400> 206 ggtattcagt tggggctcag	20
<210> 207 <211> 20 <212> DNA <213> Homo sapiens	
<400> 207 tgtatccacg tggtcagctc	20
<210> 208 <211> 18 <212> DNA <213> Homo sapiens	
<400> 208 acaggacgct cggccaac	18
<210> 209 <211> 25 <212> DNA <213> Homo sapiens	
<400> 209 ttgccatcag tacaaatgag tttag	25
<210> 210 <211> 24 <212> DNA <213> Homo sapiens	
<400> 210 ttcttgcttt ttaagagtga tctg	24
<210> 211 <211> 20 <212> DNA <213> Homo sapiens	

<400> 211 aggaaggaag ggatggaaac	20
<210> 212 <211> 18 <212> DNA <213> Homo sapiens	
<400> 212 agaaaccact catgaaaa	18
<210> 213 <211> 22 <212> DNA <213> Homo sapiens	
<400> 213 cgcattacta catgatccac tg	22
<210> 214 <211> 21 <212> DNA <213> Homo sapiens	
<400> 214 tgtcacagaa agcatgagac c	21
<210> 215 <211> 29 <212> DNA <213> Homo sapiens	
<400> 215 agaaataact gtcaatatcc cagtatcac	29
<210> 216 <211> 27 <212> DNA <213> Homo sapiens	
<400> 216 tcattaaaca tttagtaatg tgtgctc	27
<210> 217 <211> 19 <212> DNA <213> Homo sapiens	
<400> 217 aggcaacagg gcaagactc	19
<210> 218 <211> 21 <212> DNA <213> Homo sapiens	

<400> 218  
 cctgaaaggg agaataaaag g 21  
  
 <210> 219  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 219  
 cctgaaaggg agaataaaag g 21  
  
 <210> 220  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 220  
 tattgaccca gccagcagac 20  
  
 <210> 221  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 221  
 tatattgaga ctcaaataac ga 22  
  
 <210> 222  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 222  
 tgatgcatat cagagcgtga g 21  
  
 <210> 223  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 223  
 ttcaatgacc atgacaaaac g 21  
  
 <210> 224  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 224  
 ttcaatgacc atgacaaaac g 21  
  
 <210> 225  
 <211> 21  
 <212> DNA

<213> Homo sapiens

<400> 225

tggttttcaa gcagacaatc c

21

<210> 226

<211> 21

<212> DNA

<213> Homo sapiens

<400> 226

tcctcctcaa tgaaagcaga g

21

<210> 227

<211> 20

<212> DNA

<213> Homo sapiens

<400> 227

caatgtgatc ccaactggtc

20

<210> 228

<211> 21

<212> DNA

<213> Homo sapiens

<400> 228

ttattgcaa ttggagtttg g

21

<210> 229

<211> 22

<212> DNA

<213> Homo sapiens

<400> 229

ttctgttggc ttatcatttt tg

22

<210> 230

<211> 23

<212> DNA

<213> Homo sapiens

<400> 230

cccagaaact aaataaaatg cag

23

<210> 231

<211> 25

<212> DNA

<213> Homo sapiens

<400> 231

aatcaaattt gttgcattaa aaatc

25

<210> 232

<211> 23

<212> DNA  
 <213> Homo sapiens  
  
 <400> 232  
 gttttctcat tcctttctct tcc 23  
  
 <210> 233  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 233  
 tttgggaaag ggaacacaag 20  
  
 <210> 234  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 234  
 gatttttctt tggaacatcc tc 22  
  
 <210> 235  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 235  
 cggggatcag atttgctatg 20  
  
 <210> 236  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 236  
 taggggtca tcctcaggtc 20  
  
 <210> 237  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 237  
 gtcttcccct gctcaatcac 20  
  
 <210> 238  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 238  
 gacacgttgt gggccagcca gt 22  
  
 <210> 239



<211> 24  
<212> DNA  
<213> Homo sapiens

<400> 239  
ctgccggtta tcttcggaca cggt 24

<210> 240  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 240  
tgagtgaggg cagacagatg 20

<210> 241  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 241  
tggcacctga accatgtaag 20

<210> 242  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 242  
cgtacatgcc gaagtctgtc 20

<210> 243  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 243  
gccctggttt taacccttaa c 21

<210> 244  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 244  
ccagctccag cttctgactc 20

<210> 245  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 245  
ttgtgttttc ttggagacag 20

<210> 246  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 246  
 caatgagcat gggagagatg 20  
  
 <210> 247  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 247  
 tggagtttct gggactacag g 21  
  
 <210> 248  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 248  
 ccttcttcaa agctgattct ctc 23  
  
 <210> 249  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 249  
 cgctctacag ccaatcacag 20  
  
 <210> 250  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 250  
 tggcatcaca atcaataggg 20  
  
 <210> 251  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 251  
 ctccaagggg gttagagtcc 20  
  
 <210> 252  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 252  
 caggaaacca ggtcagaagt g 21

<210> 253  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 253  
 tttttgcaga aaggggtctt ac 22  
  
 <210> 254  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 254  
 gcccacccca ctctagaaac 20  
  
 <210> 255  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 255  
 tggaaccttt tctgctcaaa g 21  
  
 <210> 256  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 256  
 agctgcatgg tgccaaag 18  
  
 <210> 257  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 257  
 ataacaatgg gcacatgcag 20  
  
 <210> 258  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 258  
 ggtcattctt ccatcagcaa g 21  
  
 <210> 259  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 259

cacacccaca ctcacacaaa g

21

<210> 260

<211> 20

<212> DNA

<213> Homo sapiens

<400> 260

ggcactgcag gctaataatg

20

<210> 261

<211> 22

<212> DNA

<213> Homo sapiens

<400> 261

gggacctcaa gtcttttcct tc

22

<210> 262

<211> 22

<212> DNA

<213> Homo sapiens

<400> 262

gggacctcaa gtcttttcct tc

22

<210> 263

<211> 20

<212> DNA

<213> Homo sapiens

<400> 263

ggaaggggaag gaggacaaac

20

<210> 264

<211> 22

<212> DNA

<213> Homo sapiens

<400> 264

cgtctcaaac taccaagtct gg

22

<210> 265

<211> 20

<212> DNA

<213> Homo sapiens

<400> 265

cacccagtgc tgtttcaatg

20

<210> 266

<211> 20

<212> DNA

<213> Homo sapiens

<400> 266	
cgccgcataa tgtgtaaaac	20
<210> 267	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 267	
tgccatattt aactgccatt tc	22
<210> 268	
<211> 22	
<212> DNA	
<213> Homo sapiens	
<400> 268	
tgccatattt aactgccatt tc	22
<210> 269	
<211> 24	
<212> DNA	
<213> Homo sapiens	
<400> 269	
gcagtcactg agacagcttt tatc	24
<210> 270	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 270	
taagcatagc ctcggaac	20
<210> 271	
<211> 24	
<212> DNA	
<213> Homo sapiens	
<400> 271	
ggaccattaa tagctacctt cctg	24
<210> 272	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 272	
aggcaagaca acatatttga aag	23
<210> 273	
<211> 23	
<212> DNA	
<213> Homo sapiens	

<400> 273	
aagggtatg tgcattttg ttc	23
<210> 274	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 274	
catcaagcaa gcaaacaat g	21
<210> 275	
<211> 19	
<212> DNA	
<213> Homo sapiens	
<400> 275	
aattccccca aaagcttcc	19
<210> 276	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 276	
ttccctcctg gctaagaacc	20
<210> 277	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 277	
aaaagcagag ggaatcatcg	20
<210> 278	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 278	
tcccatcat gacctggaag	20
<210> 279	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 279	
ggcccgttt aagagatcag	20
<210> 280	
<211> 18	
<212> DNA	

<213> Homo sapiens

<400> 280

catgcccaaa gtcgatcc

18

<210> 281

<211> 20

<212> DNA

<213> Homo sapiens

<400> 281

acacatccat ggtggttggtg

20

<210> 282

<211> 20

<212> DNA

<213> Homo sapiens

<400> 282

tgccacagcc acatagtctc

20

<210> 283

<211> 22

<212> DNA

<213> Homo sapiens

<400> 283

ttctatctgc agactcccac ag

22

<210> 284

<211> 21

<212> DNA

<213> Homo sapiens

<400> 284

ggaaaagaaa gcaggagaag c

21

<210> 285

<211> 21

<212> DNA

<213> Homo sapiens

<400> 285

aaatggagaa aagcctgggtt c

21

<210> 286

<211> 19

<212> DNA

<213> Homo sapiens

<400> 286

aagcaatcct cccaccttg

19

<210> 287

<211> 22

<212> DNA  
 <213> Homo sapiens  
  
 <400> 287  
 ccttcctttt tcactcacac ac 22  
  
 <210> 288  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 288  
 tgatttaata atgaagatgg gttgg 25  
  
 <210> 289  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 289  
 actcagtacc ccaggcagag 20  
  
 <210> 290  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 290  
 tcaaactcct gggctcaaac 20  
  
 <210> 291  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 291  
 cagccacatc cccctatg 18  
  
 <210> 292  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 292  
 tgccttcttc cactcctttc 20  
  
 <210> 293  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 293  
 aagagtgaaa gcagagatgt tcc 23  
  
 <210> 294



<211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 294  
 actaagcctc aggagcagcc t 21  
  
 <210> 295  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 295  
 gataacttggg gaagagagac ctacc 25  
  
 <210> 296  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 296  
 gaggggagag gagggggag 19  
  
 <210> 297  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 297  
 cacaaacctg cccacattgc 20  
  
 <210> 298  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 298  
 cctgggcggc tcaactct 18  
  
 <210> 299  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 299  
 aggcgtttcc gtttatggc 19  
  
 <210> 300  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 300  
 ctgcttcttg agtaacactt acg 23

<210> 301  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 301  
 gattacgaag gtattggttt agacag 26  
  
 <210> 302  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 302  
 ggtgttaaaa atagttccat agttcg 26  
  
 <210> 303  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 303  
 tataagcagt ccctgccttc 20  
  
 <210> 304  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 304  
 tataagcagt ccctgccttc 20  
  
 <210> 305  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 305  
 ctgggcgaga gtgagattcc 20  
  
 <210> 306  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 306  
 atgaaccag gaggcagag 19  
  
 <210> 307  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 307  
 cggagatttg gatgttctcc 20

<210> 308  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 308  
 cggagatttg gatgttctcc 20  
  
 <210> 309  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 309  
 tttgtagaaa tggggtcttg c 21  
  
 <210> 310  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 310  
 aattcctgaa gctctcccaa g 21  
  
 <210> 311  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 311  
 tgctgaacca gtcaaactcc 20  
  
 <210> 312  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 312  
 ttgcaatatt ggtcctagag ttc 23  
  
 <210> 313  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 313  
 ccacaaatat caatttacia ccattg 26  
  
 <210> 314  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 314

tggaataat gttaagggtg ttttt 25

<210> 315  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 315  
tctgcatggc cgatctaaag 20

<210> 316  
<211> 26  
<212> DNA  
<213> Homo sapiens

<400> 316  
aaagttgaga agtcatcac tggtag 26

<210> 317  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 317  
tggttccaaa tcctaattctg c 21

<210> 318  
<211> 23  
<212> DNA  
<213> Homo sapiens

<400> 318  
ttgagggtag gagaatgaga gag 23

<210> 319  
<211> 22  
<212> DNA  
<213> Homo sapiens

<400> 319  
catgcatatt tcaaagggtca ag 22

<210> 320  
<211> 26  
<212> DNA  
<213> Homo sapiens

<400> 320  
tcaagtaaga ggaggatatg tcaaag 26

<210> 321  
<211> 24  
<212> DNA  
<213> Homo sapiens

<400> 321 catcaaatat ttcaaagggtt gagc	24
<210> 322 <211> 20 <212> DNA <213> Homo sapiens	
<400> 322 gtcaaaacaa atggcacacg	20
<210> 323 <211> 20 <212> DNA <213> Homo sapiens	
<400> 323 ttacaggcat gaaccaccac	20
<210> 324 <211> 20 <212> DNA <213> Homo sapiens	
<400> 324 cctatgcaat cggctctttgc	20
<210> 325 <211> 21 <212> DNA <213> Homo sapiens	
<400> 325 ggggattttt gttttgtttt g	21
<210> 326 <211> 20 <212> DNA <213> Homo sapiens	
<400> 326 aaaggggaaa tgcgtaggac	20
<210> 327 <211> 20 <212> DNA <213> Homo sapiens	
<400> 327 tcccaaagtg ctgggattac	20
<210> 328 <211> 27 <212> DNA <213> Homo sapiens	

<400> 328  
 ccagaactta aagtgaaatt taaaaag 27  
  
 <210> 329  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 329  
 gcgaggcaaa acacaaagc 19  
  
 <210> 330  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 330  
 ttggaaatgg ctgtaccta g 21  
  
 <210> 331  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 331  
 tacttgagca gcccacagg 19  
  
 <210> 332  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 332  
 aaaggaatga aagtggtttt tgtc 24  
  
 <210> 333  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 333  
 tgcaatgtaa tagttttcca agg 23  
  
 <210> 334  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 334  
 cagcaaatga actaagccac ag 22  
  
 <210> 335  
 <211> 24  
 <212> DNA

<213> Homo sapiens

<400> 335

tgctatacta ttgcccaca aaac

24

<210> 336

<211> 24

<212> DNA

<213> Homo sapiens

<400> 336

gaatgcattt attcagagat gagg

24

<210> 337

<211> 21

<212> DNA

<213> Homo sapiens

<400> 337

tgctagacac ttgctgggtca c

21

<210> 338

<211> 25

<212> DNA

<213> Homo sapiens

<400> 338

ttgatattaa agttgcacaa actgc

25

<210> 339

<211> 25

<212> DNA

<213> Homo sapiens

<400> 339

tcaattgtgt gacatatcac ctacc

25

<210> 340

<211> 24

<212> DNA

<213> Homo sapiens

<400> 340

tcactgtaga aatccaagta ccac

24

<210> 341

<211> 21

<212> DNA

<213> Homo sapiens

<400> 341

tctgcatcag ttgattctg c

21

<210> 342

<211> 22

<212> DNA  
 <213> Homo sapiens  
 <400> 342  
 aatgcacttt ttattttatt ag 22  
 <210> 343  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 343  
 gaaaagtgcc ggttcttgag 20  
 <210> 344  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 344  
 gcctacacag tccgttttcc 20  
 <210> 345  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
 <400> 345  
 agaggagcgt gtgttgag 19  
 <210> 346  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 346  
 actctgacgg tggagctgag 20  
 <210> 347  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
 <400> 347  
 gctcttggtg ctaagttaaa gagg 24  
 <210> 348  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 348  
 atccagctgg ctctgatagg 20  
 <210> 349



<211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 349  
 tgaacagcca gatcctctcc 20  
  
 <210> 350  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 350  
 gtccacacctt gtttaggaagc 20  
  
 <210> 351  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 351  
 tggcattctg aaaacggttc 20  
  
 <210> 352  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 352  
 gcaaacagcc tggacaatc 19  
  
 <210> 353  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 353  
 cacatatttc tgtcccctgt tg 22  
  
 <210> 354  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 354  
 tgtggttctt tggagcacag 20  
  
 <210> 355  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 355  
 ccaaggtaca tttcgaaaa c 21

<210> 356  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 356  
 accagccctt tcctcttgtc 20  
  
 <210> 357  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 357  
 ttcttctca tgccattgtg 20  
  
 <210> 358  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 358  
 gtggcatctg gctgtcatc 19  
  
 <210> 359  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 359  
 caattagttt tccttgagca ctcc 24  
  
 <210> 360  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 360  
 tcttctttat ccaggacatc tgtg 24  
  
 <210> 361  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 361  
 cctgggagag gtctgggtc 19  
  
 <210> 362  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 362  
 ggcagcatct tggctctgaag 20

<210> 363  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 363  
 gagcacttgg gagacctgag 20  
  
 <210> 364  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 364  
 aggggaagcat gagcacagtc 20  
  
 <210> 365  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 365  
 tgagttctgt ctggctgtgg 20  
  
 <210> 366  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 366  
 tgatgagggga tgagggaaac 20  
  
 <210> 367  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 367  
 agggttaggg agcctagctg 20  
  
 <210> 368  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 368  
 tccttgaac acccctgtc 19  
  
 <210> 369  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 369

cagtcacgat acctacactt ccac 25

<210> 370  
<211> 25  
<212> DNA  
<213> Homo sapiens

<400> 370  
caactctgaa ataaaagcaa tctgg 25

<210> 371  
<211> 25  
<212> DNA  
<213> Homo sapiens

<400> 371  
ttctttgggt atgaaatgaa caac 25

<210> 372  
<211> 27  
<212> DNA  
<213> Homo sapiens

<400> 372  
ttgaataaaa gtagatgttt cttgtcc 27

<210> 373  
<211> 27  
<212> DNA  
<213> Homo sapiens

<400> 373  
taccaagaat ataatacgtt gttatgg 27

<210> 374  
<211> 20  
<212> DNA  
<213> Homo sapiens

<400> 374  
cggcttctgg cacataaaac 20

<210> 375  
<211> 23  
<212> DNA  
<213> Homo sapiens

<400> 375  
ccattgagca ctccattcat tac 23

<210> 376  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 376	
ccctgggaat ctgaaagaat g	21
<210> 377	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 377	
tgggccgttg tctcatatac	20
<210> 378	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 378	
cactctggct tttccctctg	20
<210> 379	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 379	
aggatcatgaa tgggatcctg	20
<210> 380	
<211> 19	
<212> DNA	
<213> Homo sapiens	
<400> 380	
catattgctt ggcgtccac	19
<210> 381	
<211> 21	
<212> DNA	
<213> Homo sapiens	
<400> 381	
tcttggtgat ctttgccttt g	21
<210> 382	
<211> 27	
<212> DNA	
<213> Homo sapiens	
<400> 382	
tcatcaagat tattcgatat ttgagtc	27
<210> 383	
<211> 22	
<212> DNA	
<213> Homo sapiens	

<400> 383	
cgagaaagta aagtcctgc tg	22
<210> 384	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 384	
cgggattgga gacagacatc	20
<210> 385	
<211> 19	
<212> DNA	
<213> Homo sapiens	
<400> 385	
gaggatgctg ccatttgtg	19
<210> 386	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 386	
catgctaaca gagtgtcaag agc	23
<210> 387	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 387	
cgaattcttt ttgccatttc	20
<210> 388	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 388	
aaagtctgca aggggctatg	20
<210> 389	
<211> 23	
<212> DNA	
<213> Homo sapiens	
<400> 389	
tcaggctaga aatgtatcca agg	23
<210> 390	
<211> 20	
<212> DNA	

<213> Homo sapiens  
 <400> 390  
 aaaggaaagg ggtaatccag 20  
 <210> 391  
 <211> 27  
 <212> DNA  
 <213> Homo sapiens  
 <400> 391  
 ttctacttttt atgattacct ctgatgc 27  
 <210> 392  
 <211> 27  
 <212> DNA  
 <213> Homo sapiens  
 <400> 392  
 aaagaaaatt caaatgaaaa taagtcg 27  
 <210> 393  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
 <400> 393  
 catgcaaact tgggtctaga tg 22  
 <210> 394  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 394  
 ttggcttttt cccctcatat 20  
 <210> 395  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
 <400> 395  
 taaagccttt cccagctcag 20  
 <210> 396  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
 <400> 396  
 cctgctgctt ccacaggac 19  
 <210> 397  
 <211> 19

<212> DNA  
 <213> Homo sapiens  
  
 <400> 397  
 catggacgtc ctgtggaag 19  
  
 <210> 398  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 398  
 gtgtcccatt catcctcacc 20  
  
 <210> 399  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 399  
 aacagaggag gcgctgaag 19  
  
 <210> 400  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 400  
 gcctcaccct acccatcc 18  
  
 <210> 401  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 401  
 agattgctgg ggttcctttc 20  
  
 <210> 402  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 402  
 ccacctcact ccatctctgg 20  
  
 <210> 403  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 403  
 tggggtaagt tccctgagtg 20  
  
 <210> 404



<211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 404  
 tacagagcca gggagagtgc 20  
  
 <210> 405  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 405  
 tatcatccac atcggtcagc 20  
  
 <210> 406  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 406  
 tttgggacaa gtaattgtta ttagc 25  
  
 <210> 407  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 407  
 ttgaatgcag tgggtgctctc 20  
  
 <210> 408  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 408  
 tctgcctgtg ttctgagctg 20  
  
 <210> 409  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 409  
 gaactcagct ctgcctggac 20  
  
 <210> 410  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 410  
 gcgagactcg gtctcaaaag 20

<210> 411  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 411  
 atcgtttgcc aactcctagc 20  
  
 <210> 412  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 412  
 aatcagtgca ggtgatgcag 20  
  
 <210> 413  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 413  
 acatggcctg tgtctgcttc 20  
  
 <210> 414  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 414  
 gactggaaga aaataaccaa gtttc 25  
  
 <210> 415  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 415  
 ggcaggcggtt aaaggaatag 20  
  
 <210> 416  
 <211> 19  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 416  
 aaaaacaggg cacccattg 19  
  
 <210> 417  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 417  
 ttaagcccac agggaacaag 20

<210> 418  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 418  
 tgtcagacct tggccttttc 20  
  
 <210> 419  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 419  
 tcttctgaaa aatggaggaa gtc 23  
  
 <210> 420  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 420  
 gctcttcctg gggaagtctc 20  
  
 <210> 421  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 421  
 cagtttttga ctgccactgc 20  
  
 <210> 422  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 422  
 tccatgctcg acactattct g 21  
  
 <210> 423  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 423  
 ttctacttta catacaaaag gcactc 26  
  
 <210> 424  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 424

agttgggctt agcctggatg 20

<210> 425

<211> 21

<212> DNA

<213> Homo sapiens

<400> 425

agtatcacgt ccatgttgga g 21

<210> 426

<211> 21

<212> DNA

<213> Homo sapiens

<400> 426

caatgtttgc tttgaaaaag g 21

<210> 427

<211> 20

<212> DNA

<213> Homo sapiens

<400> 427

tgagcaaaac ctgtggaatg 20

<210> 428

<211> 20

<212> DNA

<213> Homo sapiens

<400> 428

tttgctggtg ctgtctatgg 20

<210> 429

<211> 22

<212> DNA

<213> Homo sapiens

<400> 429

ggatgtgcaa aatgttcttc tg 22

<210> 430

<211> 21

<212> DNA

<213> Homo sapiens

<400> 430

gggagcaggt gttattgatt g 21

<210> 431

<211> 20

<212> DNA

<213> Homo sapiens

<400> 431 ggtgaggagt tttcccaagc	20
<210> 432 <211> 26 <212> DNA <213> Homo sapiens	
<400> 432 agcacagagt ttgttaatgt ttttag	26
<210> 433 <211> 23 <212> DNA <213> Homo sapiens	
<400> 433 gctgacttct attgggagca tac	23
<210> 434 <211> 21 <212> DNA <213> Homo sapiens	
<400> 434 cagaggtatg gtttgggtct c	21
<210> 435 <211> 21 <212> DNA <213> Homo sapiens	
<400> 435 tggtgggtcta ggactatgga g	21
<210> 436 <211> 26 <212> DNA <213> Homo sapiens	
<400> 436 gctgtgtttt cttaatttcc tgtatg	26
<210> 437 <211> 19 <212> DNA <213> Homo sapiens	
<400> 437 cagcctcctg cagactttg	19
<210> 438 <211> 20 <212> DNA <213> Homo sapiens	

<400> 438	
cattttggga aaggaggttc	20
<210> 439	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 439	
cggtcagtat gacggtaggg	20
<210> 440	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 440	
aggtcatgaa tgggatcctg	20
<210> 441	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 441	
ggcgctaatc gtactgaaac	20
<210> 442	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 442	
tatggtggcc atggagactg	20
<210> 443	
<211> 19	
<212> DNA	
<213> Homo sapiens	
<400> 443	
aggagccctc ctttgattg	19
<210> 444	
<211> 20	
<212> DNA	
<213> Homo sapiens	
<400> 444	
ggccagtggc atctgctgac	20
<210> 445	
<211> 24	
<212> DNA	

<213> Homo sapiens

<400> 445

aagacaaaat cccaaataaa gcag

24

<210> 446

<211> 20

<212> DNA

<213> Homo sapiens

<400> 446

attggtttga gtgccctttg

20

<210> 447

<211> 22

<212> DNA

<213> Homo sapiens

<400> 447

aaaatgcttt gcactgactc tg

22

<210> 448

<211> 25

<212> DNA

<213> Homo sapiens

<400> 448

ttcatcttta ttgccctat atctg

25

<210> 449

<211> 26

<212> DNA

<213> Homo sapiens

<400> 449

ttaaagatta taccaagtca gtggtc

26

<210> 450

<211> 20

<212> DNA

<213> Homo sapiens

<400> 450

catgtggttt cttgcctttg

20

<210> 451

<211> 24

<212> DNA

<213> Homo sapiens

<400> 451

aagcataggc tcagcact acac

24

<210> 452

<211> 22

<212> DNA  
 <213> Homo sapiens  
  
 <400> 452  
 cccatcaact accatgtgac tg 22  
  
 <210> 453  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 453  
 ggtcctgttg tcagtttttc ag 22  
  
 <210> 454  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 454  
 ggtcctgggg tgctcctaga 20  
  
 <210> 455  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 455  
 tcctcaactg agccaagtag cc 22  
  
 <210> 456  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 456  
 tgtgtcctcc atgttctggt gg 22  
  
 <210> 457  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 457  
 tggcccctct gcctagca 18  
  
 <210> 458  
 <211> 18  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 458  
 ccactgctgg gtcctggg 18  
  
 <210> 459



<211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 459  
 gaatagagag cttttcctga gatgc 25  
  
 <210> 460  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 460  
 gattcatcctt gaagaagttg atgg 24  
  
 <210> 461  
 <211> 20  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 461  
 acttgatgcc cccaagaatc 20  
  
 <210> 462  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 462  
 ctcaagaagc agaaagggaa g 21  
  
 <210> 463  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 463  
 tctacagagt tccctgtttg c 21  
  
 <210> 464  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 464  
 gctgtggatc ttagggacct c 21  
  
 <210> 465  
 <211> 26  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 465  
 aaaaagcatt tctgatatgg ataaag 26

<210> 466  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 466  
 tcgaagtatg ttgctatcct ctg 23  
  
 <210> 467  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 467  
 aaaataataa gcatcagcat ttgac 25  
  
 <210> 468  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 468  
 ttattccaga cgcatttcca c 21  
  
 <210> 469  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 469  
 tttgagtcta tcgagtgtgt gc 22  
  
 <210> 470  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 470  
 ttcttggttt tcggttggtt g 21  
  
 <210> 471  
 <211> 21  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 471  
 tgaattttcc ttttggggaa g 21  
  
 <210> 472  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 472  
 tggatcaaat ccaaataaag taagg 25

<210> 473  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 473  
 ttgctttttc tgtaaatacat ctgtg 25  
  
 <210> 474  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 474  
 tatttcattt atttatgtgg ac 22  
  
 <210> 475  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 475  
 gaagttaagg cagtgtttta gatgg 25  
  
 <210> 476  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 476  
 accagtaata tccactttct ttctg 25  
  
 <210> 477  
 <211> 24  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 477  
 tttattggat ttcaaaaatg agtg 24  
  
 <210> 478  
 <211> 25  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 478  
 tctcatgtga gaaagagatt agcag 25  
  
 <210> 479  
 <211> 22  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 479

22

18

22

21

23

21

20

- 76 -

<400> 486

ttacttatag gtttcaggag atgtggt

<210> 487

<211> 23

<212> DNA

<213> Homo sapiens

<400> 487

gggtctttcg aatgtatgca atg



27

23